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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,250	03/12/2002	Masaaki Nakamura	Q67901	1287

7590 03/10/2005  
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EXAMINER	
GRAY, JILL M	
ART UNIT	PAPER NUMBER
1774	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/019,250

Applicant(s)

NAKAMURA

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 and 24-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/28/01;04/16/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1-12, 22 and 23, further electing the polyester fiber and cobalt metal in the reply filed on August 20, 2004 and December 14, 2004 is acknowledged.

### ***Claim Objections***

Claim 11 is objected to because of the following informalities: In claim 11, "comprises" is misspelled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, in claims 2-4 the language of "in elemental cobalt basis" is vague and indefinite. The baseline for these claims is not clearly defined. Alternative, it is not clear if the coating layers contain the requisite amounts in elemental cobalt.

In claim 6, the language of "a parallel filament often pieces or less of adjoining filaments" is vague and does not clearly describe the structural configuration of the fiber aggregate.

### ***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al, 4,872,932 (Yoshikawa) in view of Marshall et al, 4,397,985 (Marshall).

Yoshikawa teaches a rubbery composite material comprising a substrate and a rubber composition bonded thereto, said rubbery composite being prepared by metallizing a substrate with a thin film of a metal such as cobalt or an alloy thereof wherein the film has a thickness of 10 angstroms to 100 $\mu$ , as required by claim 1. See abstract and column 6, lines 24-30. In addition, Yoshikawa teaches that the cobalt content is more than 50% by weight, per claims 2-4. See column 6, lines 20-23. The substrates taught by Yoshikawa can be metals, plastics or ceramics, wherein the plastic can be polyester; however, Yoshikawa does not teach polyester fiber. See column 5, lines 15-40. Also, Yoshikawa teaches that the particular material, shape and size of the substrate used may be properly selected depending on the intended application (note column 5, lines 38-41), further teaching that his rubbery composite materials can be used in the formation of tires, belts and hoses (note column 4, lines 62-64).

The formation of tires, belts and hoses utilizing polyester fiber aggregates is known in the art and, enhancing the adherence of said polyester fiber aggregates to rubber composite materials using a cobalt compound is also known in the art as

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evidenced by the teachings of Marshall. Marshall teaches a polyester yarn used in reinforcing rubber in the formation of tires and belts, said yarn being treated with a cobalt containing solution that significantly improves the fiber to rubber adhesion of the cords treated therewith, per claims 10 and 12. See abstract, column 2, lines 57-61 and column 8, lines 20-22. It would have been obvious to the skilled artisan at the time the invention was made to modify the teachings of Yoshikawa by using as the plastic polyester substrate a polyester yarn or cord, with the reasonable expectation of obtaining a rubbery composite material comprising polyester yarn or cord with improved adherence to the rubber composition, said rubbery composite material being suitable in the formation of tire, hoses or belts. As to the fibers being substantially non-bundled, per claims 5-7, these claims do not preclude the presence of some bundling.

Furthermore, in the absence of a single fiber or monofilament, it is not readily apparent as to how the multifilaments can be "substantially non-bundled". Presumably, the multifilaments have to be "gathered" in some way after spinning or drawing, and upon incorporation in the rubbery composite. Accordingly, in the absence of clear evidence to the contrary, the examiner has reason to believe that the fibers are "substantially non-bundled". As to claims 8-9, Yoshikawa teaches that his coatings are deposited using a dry-plating process, and that the coating thicknesses are within the claimed critical range. The prior art teaches a fiber aggregate of the type contemplated by applicants. Accordingly, the examiner has reason to believe that said aggregate has a permeability to dry plating particles. The language of "which allows the plating particles passing through the fiber aggregate to form a plating layer having a maximum thickness of 10

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angstroms or more on a film disposed on the back surface of the fiber aggregate with a distance of 1 mm or less, when measured by carrying out a dry plating treatment under conditions such that a plating layer having a maximum thickness of 40 $\mu$ m or less is formed on a film disposed on the front surface of the fiber aggregate” is drawn to process limitations which add no patentable weight to the product.

Therefore, the combined teachings of Yoshikawa and Marshall would have rendered obvious the invention as claimed in present claims 1-10, 12 and 22-23.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al, 4,872,932 (Yoshikawa) in view of Marshall et al, 4,397,985 (Marshall), further in view of Shindo et al, 5,049,447 (Shindo).

Yoshikawa and Marshall are as set forth above, but do not teach the specific properties of the polyester. Shindo teaches polyester fiber for use in the production of tire cords and belts, said polyester fiber being essentially as claimed in claim 11. See Table 2. It would have been obvious to one of ordinary skill in the art to as the polyester fiber of Marshall, a polyester fiber having the requisite properties as claimed by applicants and as taught by Shindo with the reasonable expectation of forming a cord to be used as reinforcement for rubber, said cord having a high tenacity, chemical stability, modulus and low shrinkage.

Accordingly, the combined teachings of Yoshikawa, Marshall and Shindo would have rendered obvious the invention as claimed in present claim 11.

***Double Patenting***

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Claim 9 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 09/960,345 in view of Honda, et al, 3,705,868 (Honda). The present invention is drawn to rubber reinforcing fiber having a coating of layer of a metal or metallic compound that can be cobalt. The copending application is drawn to a rubber-based composite material comprising a non-woven fabric and a coating of a metal or metallic compound reactable with sulfur wherein said compound can be cobalt or an oxide of cobalt. The formation of fibers into fabrics is an obvious variant and

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Honda teaches polyester fibrous material for reinforcing rubber articles, wherein the fibrous material can be in the form of filaments, fabrics or canvas.

This is a provisional obviousness-type double patenting rejection.


**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jill M. Gray  
Examiner  
Art Unit 1774

jmg